

Trend Study 14-3-99

Study site name: Gold Queen Basin.

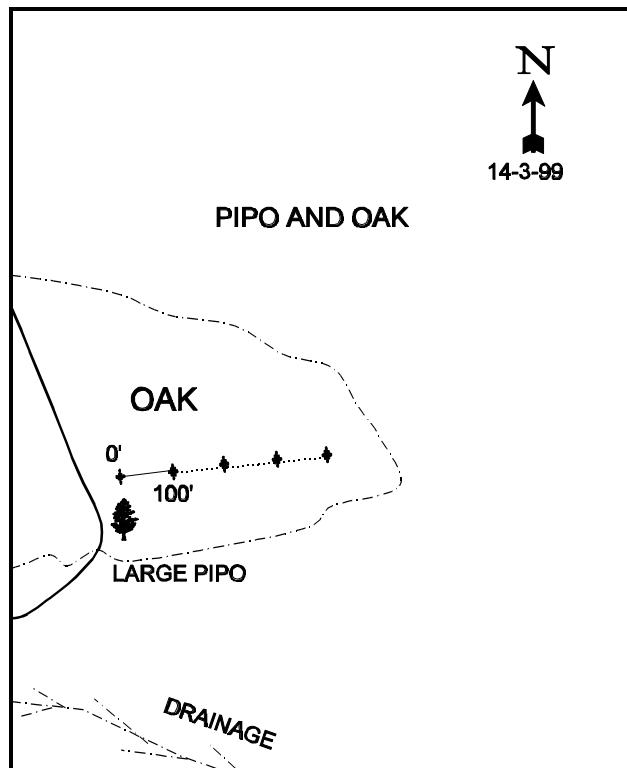
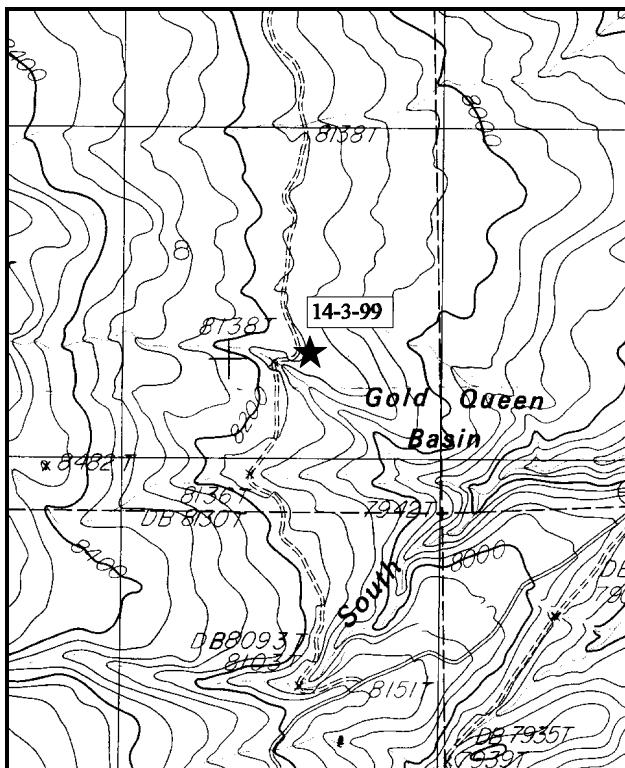
Range type: Gambel Oakbrush.

Compass bearing: frequency baseline 69°M.

Footmark (first frame placement) 5 feet, footmarks (frequency belts) line 1 (11 & 95ft), line 2 (34ft), line 3 (59ft), line 4 (71ft).

LOCATION DESCRIPTION

From the junction of the Blue Mountain Road (the road to Monticello Lake) and the South Creek Road on the west side of Monticello, travel southwest on the South Creek Road for 5.1 miles to a fork. Take the right hand fork for 0.9 miles to where the road makes a sharp turn to the north at the top of a steep dugway. Stop here, then walk to the largest ponderosa pine on the east side of the road. The 0 foot stake, a short red fencepost marked with browse tag #7875, is 5 paces north of this pine tree.



Map Name: Abajo Peak

Township 34S, Range 23E, Section 8

Diagrammatic Sketch

UTM 4188336.123 N, 639565.736 E

DISCUSSION

Trend Study No. 14-3 (35-3)

The Gold Queen Basin study is located on the east slope of the Abajo Mountains at an elevation of 8,200 feet. Aspect is generally to the northeast on a 18% slope. The site is an oakbrush-dominated opening surrounded by large ponderosa pines. Point quarter data from 1999 estimate 43 ponderosa pine, 19 pinyon, and 40 maple trees/acre. Average diameter is estimated at 14 inches for ponderosa pine and 2.4 inches for pinyon and only ½ of an inch for maple. Shrub density strip data estimated 100 ponderosa pine trees/acre, the majority (80%) consisting of young trees.

Deer and elk mostly use this area during the summer. Pellet group transect data from 1999 estimate 19 deer days use/acre (47 deer days use/ha), 10 elk days use/acre (25 elk days use/ha), and 5 cow use days/acre (12 cow days use/ha). Cow pats appeared to be from last fall, while the deer pellet groups were from this spring. Turkey scat was also observed on the site. Roads in the area are mainly a result of oil and gas leasing and mineral exploration. Now these roads are used for recreational activities.

Soil throughout the site appears to be moderately deep and rocky, especially at the beginning of the baseline. Estimated effective rooting depth is estimated at nearly 20 inches. Soil texture is a sandy clay loam with a slightly acid pH (6.2). Parent material appears to be granite with large rocks present through the profile. Protective ground cover is abundant with high amounts of litter and herbaceous cover which provides excellent soil protection. Even with the 20% slope, there is little evidence of erosion.

There are several shrub species on the site, including large numbers of Oregon grape, Gambel oak and snowberry. Snowberry is an important browse species on this sight which provided 36% of the total browse cover in 1999. It shows light use and good vigor with a high density of 8,260 plants/acre in 1999. Gambel oak is also common with an estimated density of 11,360 stems/acre in 1999. Plants vary in size from shorter growth forms near the beginning of the baseline to tall individuals further down the line. Oak was mistakenly not included in the shrub density strips in 1994, therefore no comparisons can be made. Other browse species, Utah serviceberry, Wyoming big sagebrush, antelope bitterbrush, and Wood's rose are present but not common.

A variety of grasses occur in the area. Kentucky bluegrass, an increaser, is the most prevalent. It currently ('99) provides 79% of the total grass cover. Western wheatgrass, intermediate wheatgrass, smooth brome, Carex spp., bulbous bluegrass, subalpine needlegrass, and needle-and-thread are also present in low numbers. Forbs are diverse and produced 62% of the herbaceous cover in 1999. Common species include, Western yarrow, pussytoes, spreading fleabane, littleflower collinsia, silky Lupine, thickleaf peavine, dandelion, and clover. This variety can provide an important component of a deer's summer diet.

1986 APPARENT TREND ASSESSMENT

Data indicates good soil protection with a high percentage of protective litter and vegetative cover. Aerial vegetative cover, in the form of oakbrush appears to be on the increase. The range is currently in good condition and provides a good variety of browse and herbaceous forage for big game and livestock.

1994 TREND ASSESSMENT

Soil trend on this site has improved with percent bare ground down to only 6% at this time. The herbaceous cover is almost equal to the browse cover which is unusual for sites in the mountain brush type. The herbaceous cover protects the soils much better than aerial cover provided by browse species. The trend for browse is good. The two key browse species for the site are Gambel oak and snowberry. The oak and snowberry make up 91% of the browse cover or 51% of the total vegetative cover. The density estimate for

snowberry is down slightly from the last reading, but some of the change could be due to the rhizomatous nature of this species which make it difficult to get consistent counts from year to year. The important point is that none of the plants are classified as decadent and use is only classified as light. The Gambel oak was mistakenly not inventoried in the shrub strip counts during the 1994 reading. Data from point quarter estimates oak density at approximately 4,732 stems/acre with an average diameter of 0.6 inches. Shrub trend for the site is stable to improving. The trend for the herbaceous understory is up. Both sum of nested frequency values for grasses and forbs have increased, especially for the forbs.

TREND ASSESSMENT

soil - improving and in very good condition

browse - stable

herbaceous understory - up

1999 TREND ASSESSMENT

Trend for soil is stable. There is excellent protective ground cover which keeps erosion to a minimum. Trend for browse is up but most are unutilized. The common shrubs include Oregon grape, Gambel oak, and snowberry. All have increased in density, exhibit good vigor, and have low percent decadence. Grasses and forbs are more important in this area because they are used more on spring and summer range. Trend for the herbaceous understory is stable. The composition of grasses and forbs is very diverse but dominated by increasers which include; Kentucky bluegrass, western yarrow, pussy toes, littleflower collinsia, trailing fleabane, and dandelion.

TREND ASSESSMENT

soil - stable

browse - stable

herbaceous understory - stable

HERBACEOUS TRENDS --

Herd unit 14 , Study no: 3

T y p e	Species	Nested Frequency			Quadrat Frequency			Average Cover %	
		'86	'94	'99	'86	'94	'99	'94	'99
G	Agropyron intermedium	-	19	9	-	7	4	.13	.07
G	Agropyron smithii	a ³⁷	b ⁹⁰	b ⁶⁷	14	34	27	.56	.91
G	Bromus inermis	a ⁻	b ⁸	c ²⁰	-	3	7	.16	.11
G	Carex spp.	3	6	1	1	2	1	.03	.00
G	Koeleria cristata	4	-	-	1	-	-	-	-
G	Phlox longifolia	-	2	-	-	1	-	.00	-
G	Poa bulbosa	a ⁻	ab ²	b ⁷	-	1	3	.00	.18
G	Poa fendleriana	b ⁵⁰	a ¹⁹	ab ³⁹	19	9	13	.17	.45
G	Poa pratensis	284	267	263	94	88	84	6.32	6.22
G	Sitanion hystrix	c ²⁹	b ¹²	a ⁻	13	5	-	.10	-
G	Stipa columbiana	20	32	19	7	12	11	.38	.13
G	Stipa comata	a ⁻	a ⁻	b ¹¹	-	-	7	-	.25
G	Stipa lettermani	-	3	-	-	1	-	.03	-
G	Unknown grass - perennial	2	-	-	2	-	-	-	-

T y p e	Species	Nested Frequency			Quadrat Frequency			Average Cover %	
		'86	'94	'99	'86	'94	'99	'94	'99
	Total for Annual Grasses	0	0	0	0	0	0	0	0
	Total for Perennial Grasses	429	460	436	151	163	157	7.90	8.35
	Total for Grasses	429	460	436	151	163	157	7.90	8.35
F	<i>Achillea millefolium</i>	^a 97	^b 171	^b 153	43	64	59	2.74	4.18
F	<i>Agoseris glauca</i>	^{a-}	^b 8	^{ab} 6	-	3	2	.04	.18
F	<i>Antennaria neglecta</i>	62	39	38	25	16	17	1.40	1.14
F	<i>Androsace septentrionalis</i> (a)	-	-	2	-	-	1	-	.00
F	<i>Arabis</i> spp.	-	-	1	-	-	1	-	.00
F	<i>Arenaria congesta</i>	^a 6	^b 33	^{ab} 18	3	14	9	.60	.58
F	<i>Artemisia michauxiana</i>	16	11	14	6	5	5	.07	.47
F	<i>Aster</i> spp.	-	-	3	-	-	1	-	.03
F	<i>Carduus nutans</i> (a)	-	3	-	-	1	-	.00	-
F	<i>Calochortus nuttallii</i>	-	1	-	-	1	-	.00	-
F	<i>Chenopodium</i> spp. (a)	-	-	5	-	-	2	-	.01
F	<i>Cirsium</i> spp.	2	5	-	1	2	-	.03	-
F	<i>Collomia linearis</i> (a)	-	^a 4	^b 20	-	1	7	.00	.11
F	<i>Collinsia parviflora</i> (a)	-	78	73	-	29	27	.19	.63
F	<i>Conioselinum scopolorum</i>	^{a-}	^{ab} 3	^b 14	-	1	6	.00	.10
F	<i>Cymopterus</i> spp.	^{a-}	^b 6	^{a-}	-	3	-	.04	-
F	<i>Delphinium nuttallianum</i>	^{a-}	^b 20	^b 19	-	7	9	.03	.04
F	<i>Descurainia pinnata</i> (a)	-	3	-	-	2	-	.01	-
F	<i>Erigeron flagellaris</i>	^b 122	^a 83	^a 75	45	33	29	.80	1.78
F	<i>Eriogonum racemosum</i>	16	2	14	6	2	5	.01	.07
F	<i>Erigeron speciosus</i>	^b 9	^b 15	^{a-}	4	6	-	.08	-
F	<i>Gayophytum ramosissimum</i> (a)	-	23	17	-	9	7	.04	.03
F	<i>Lathyrus lanszwertii</i>	^a 12	^a 19	^b 49	6	10	21	.07	.69
F	<i>Lappula occidentalis</i> (a)	-	1	-	-	1	-	.00	-
F	<i>Lathyrus pauciflorus</i>	^b 15	^b 12	^{a-}	5	7	-	.11	-
F	<i>Ligusticum porteri</i>	3	-	-	1	-	-	-	-
F	<i>Lomatium dissectum</i>	^a 3	^b 31	^a 10	1	12	7	2.10	.11
F	<i>Lupinus sericeus</i>	^a 3	^b 34	^a 17	1	16	8	1.08	.43
F	<i>Lychnis drummondii</i>	7	-	-	2	-	-	-	-
F	<i>Microsteris gracilis</i> (a)	-	^b 57	^a 7	-	24	3	.12	.01
F	<i>Orobanche fasciculata</i>	-	-	6	-	-	2	-	.03
F	<i>Osmorhiza occidentalis</i>	-	-	2	-	-	1	-	.03
F	<i>Pedicularis</i> spp.	-	3	-	-	1	-	.00	-
F	<i>Penstemon thompsoniae</i>	28	19	17	10	7	7	.16	.30
F	<i>Phlox longifolia</i>	6	14	10	2	5	4	.10	.07
F	<i>Phlox</i> spp.	^{a-}	^b 22	^b 29	-	8	9	.06	.17

T y p e	Species	Nested Frequency			Quadrat Frequency			Average Cover %	
		'86	'94	'99	'86	'94	'99	'94	'99
F	Polygonum douglasii (a)	-	^b 45	^a 21	-	15	8	.07	.09
F	Potentilla fruticosa	^a -	^b 29	^a -	-	11	-	.27	-
F	Ranunculus spp.	^a -	^a -	^b 11	-	-	5	-	.02
F	Sedum spp.	-	3	-	-	1	-	.00	-
F	Senecio integerrimus	19	10	19	10	4	9	.33	.09
F	Sedum lanceolatum	^a -	^a -	^b 9	-	-	3	-	.01
F	Taraxacum officinale	^a -	^b 28	^b 34	-	15	16	.32	.98
F	Tragopogon dubius	-	1	-	-	1	-	.00	-
F	Trifolium gymnocarpon	^a 3	^b 30	^b 32	2	11	13	.59	.71
F	Unknown forb-perennial	^a -	^b 14	^{ab} 6	-	7	2	.03	.15
F	Verbascum thapsus	-	-	2	-	-	1	-	.00
F	Wyethia amplexicaulis	-	-	2	-	-	1	-	.03
Total for Annual Forbs		0	214	145	0	82	55	0.46	0.89
Total for Perennial Forbs		429	666	610	173	273	252	11.16	12.47
Total for Forbs		429	880	755	173	355	307	11.62	13.36

Values with different subscript letters are significantly different at % = 0.10

BROWSE TRENDS --

Herd unit 14 , Study no: 3

T y p e	Species	Strip Frequency		Average Cover %	
		'94	'99	'94	'99
B	Acer grandidentatum	0	0	-	-
B	Amelanchier utahensis	2	2	-	-
B	Artemesia tridentata wyomingensis	0	0	.00	-
B	Chrysothamnus depressus	1	4	.15	.06
B	Mahonia repens	26	23	1.37	1.66
B	Pinus ponderosa	0	5	.63	.56
B	Purshia tridentata	0	0	-	-
B	Quercus gambelii	0	67	14.72	10.97
B	Rosa woodsii	4	1	.06	-
B	Symphoricarpos oreophilus	78	85	8.14	7.54
Total for Browse		111	187	25.09	20.80

CANOPY COVER --

Herd unit 14 , Study no: 3

Species	Percent Cover '99
Pinus ponderosa	21
Quercus gambelii	23

BASIC COVER --
Herd unit 14 , Study no: 3

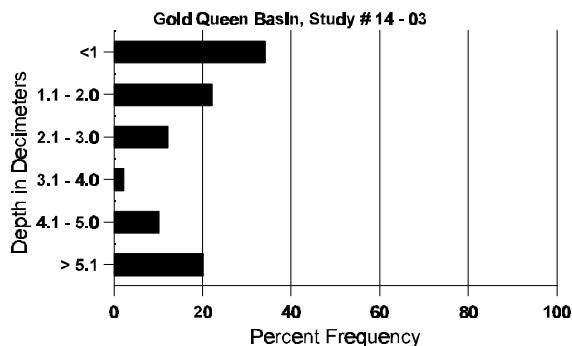
Cover Type	Nested Frequency		Average Cover %		
	'94	'99	'86	'94	'99
Vegetation	354	349	9.25	40.06	40.70
Rock	73	56	3.00	2.28	3.86
Pavement	5	13	0	.01	.09
Litter	391	392	79.00	62.72	66.68
Cryptogams	31	32	.25	.93	.89
Bare Ground	117	123	8.50	5.73	9.93

SOIL ANALYSIS DATA --

Herd Unit 14, Study # 03, Study Name: Gold Queen Basin

Effective rooting depth (inches)	Temp °F (depth)	pH	% sand	% silt	% clay	% OM	PPM P	PPM K	dS/m
20.8	49.4 (15.9)	6.2	46.9	30.6	22.6	3.4	19.1	134.4	0.5

Stoniness Index



PELLET GROUP DATA --

Herd unit 14 , Study no: 3

Type	Quadrat Frequency		Pellet Transect Days Use/Acre (ha) '99
	'94	'99	
Rabbit	1	8	N/A
Elk	-	-	10 (25)
Deer	3	7	19 (47)
Cattle	1	4	5 (12)

BROWSE CHARACTERISTICS --

Herd unit 14 , Study no: 3

A	Y	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
G	R	1	2	3	4	5	6	7	8	9	1	2	3	4			
<i>Acer grandidentatum</i>																	
S	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			%Change					
			'86	00%		'94	00%		'99	00%							
Total Plants/Acre (excluding Dead & Seedlings)												'86	0	Dec:	-		
												'94	0		-		
												'99	0		-		
<i>Amelanchier utahensis</i>																	
S	86	1	-	-	-	-	-	-	-	-	1	-	-	-	66		1
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
Y	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-
	94	1	-	-	2	-	-	-	-	-	3	-	-	-	60	8	3
	99	-	-	-	1	-	-	-	-	-	1	-	-	-	20	-	1
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			%Change					
			'86	00%		'94	00%		'99	00%							-33%
Total Plants/Acre (excluding Dead & Seedlings)												'86	0	Dec:	-		
												'94	60		-		
												'99	40		-		
<i>Artemesia tridentata wyomingensis</i>																	
S	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			%Change					
			'86	00%		'94	00%		'99	00%							
Total Plants/Acre (excluding Dead & Seedlings)												'86	0	Dec:	-		
												'94	0		-		
												'99	0		-		

A G E	Y	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total									
		1	2	3	4	5	6	7	8	9	1	2	3	4												
Chrysothamnus depressus																										
S	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
	99	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2									
Y	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
	99	1	2	-	-	-	-	-	-	-	3	-	-	-	60		3									
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-									
	94	1	-	-	-	-	-	-	-	-	1	-	-	-	20	5	16									
	99	-	-	3	-	-	-	-	-	-	3	-	-	-	60	6	9									
D	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
	94	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1									
	99	-	-	-	-	1	-	1	-	-	2	-	-	-	40		2									
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>														
'86			00%			00%			00%																	
'94			00%			00%			00%			+75%														
'99			38%			38%			00%																	
Total Plants/Acre (excluding Dead & Seedlings)												'86	0	Dec:	0%											
												'94	40		50%											
												'99	160		25%											
Mahonia repens																										
S	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
	94	-	-	-	1	-	-	-	-	-	1	-	-	-	20		1									
	99	2	-	-	-	-	-	-	-	-	2	-	-	-	40		2									
Y	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
	94	51	-	-	1	-	-	3	-	-	55	-	-	-	1100		55									
	99	31	-	-	-	-	-	-	-	-	31	-	-	-	620		31									
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-									
	94	83	-	-	35	-	-	-	-	-	113	3	2	-	2360	5	118									
	99	184	-	-	-	-	-	-	-	-	184	-	-	-	3680	4	184									
D	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
	94	1	-	-	-	-	-	-	-	-	-	-	-	1	20		1									
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0									
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>														
'86			00%			00%			00%																	
'94			00%			00%			02%			+19%														
'99			00%			00%			00%																	
Total Plants/Acre (excluding Dead & Seedlings)												'86	0	Dec:	0%											
												'94	3480		1%											
												'99	4300		0%											

A G R E	Y	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total	
		1	2	3	4	5	6	7	8	9	1	2	3	4				
Pinus ponderosa																		
Y	86	1	-	-	-	-	-	-	-	-	1	-	-	-	66		1	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	99	3	-	-	1	-	-	-	-	-	4	-	-	-	80		4	
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	99	-	-	-	-	-	-	-	-	1	-	1	-	-	20	-	1	
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
	'86																	
	'86																	
	'94																	
	'99																	
Total Plants/Acre (excluding Dead & Seedlings)																		
															'86	66	Dec:	
															'94	0	-	
															'99	100	-	
Purshia tridentata																		
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0	22	20	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
	'86																	
	'86																	
	'94																	
	'99																	
Total Plants/Acre (excluding Dead & Seedlings)																		
															'86	0	Dec:	
															'94	0	-	
															'99	0	-	
Quercus gambelii																		
S	86	105	7	4	-	-	-	-	-	-	97	6	12	1	7733		116	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	99	74	-	-	-	-	-	-	-	-	74	-	-	-	1480		74	
Y	86	78	24	35	-	-	-	-	-	-	80	15	40	2	9133		137	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	99	298	-	-	-	-	-	-	-	-	298	-	-	-	5960		298	
M	86	5	-	1	-	-	-	-	-	1	-	-	5	2	-	466	127	49
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	
	99	249	-	-	-	-	-	-	-	8	-	257	-	-	5140	28	26	
D	86	-	1	3	-	-	-	-	-	-	2	-	2	-	266		4	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	99	13	-	-	-	-	-	-	-	-	10	-	-	3	260		13	
X	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0	
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	820		41	
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>						
	'86																	
	'86																	
	'94																	
	'99																	
Total Plants/Acre (excluding Dead & Seedlings)																		
															'86	9865	Dec:	
															'94	0	-	
															'99	11360	2%	

A G R E	Y	Form Class (No. of Plants)									Vigor Class				Plants Per Acre	Average (inches) Ht. Cr.	Total
		1	2	3	4	5	6	7	8	9	1	2	3	4			
Rosa woodsii																	
Y	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	2	-	-	-	-	-	-	-	-	1	-	-	1	40		2
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
M	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0
	94	3	-	-	-	-	-	-	-	-	3	-	-	-	60	6	3
	99	3	-	-	-	-	-	-	-	-	3	-	-	-	60	4	3
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>					
	'86																
	'86																
	'94																
	'99																
Total Plants/Acre (excluding Dead & Seedlings)																	
															'86	0	Dec:
															'94	100	
															'99	60	
Symphoricarpos oreophilus																	
S	86	5	-	-	-	-	-	-	-	-	5	-	-	-	333		5
	94	4	-	-	7	-	-	-	-	-	11	-	-	-	220		11
	99	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1
Y	86	23	2	-	-	-	-	-	-	-	18	7	-	-	1666		25
	94	28	-	-	4	2	-	5	-	-	39	-	-	-	780		39
	99	149	4	-	-	-	-	-	-	-	153	-	-	-	3060		153
M	86	29	23	-	-	-	-	-	-	-	46	6	-	-	3466	19	52
	94	129	-	-	26	2	-	17	-	-	170	3	-	1	3480	16	174
	99	258	-	-	-	-	-	-	-	-	259	-	-	-	5180	16	259
D	86	2	2	-	-	-	-	-	-	-	1	3	-	-	266		4
	94	1	-	-	-	1	-	-	-	-	2	-	-	-	40		2
	99	1	-	-	-	-	-	-	-	-	1	-	-	-	20		1
X	86	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	94	-	-	-	-	-	-	-	-	-	-	-	-	-	0		0
	99	-	-	-	-	-	-	-	-	-	-	-	-	-	100		5
% Plants Showing			<u>Moderate Use</u>			<u>Heavy Use</u>			<u>Poor Vigor</u>			<u>%Change</u>					
	'86																
	'86																
	'94																
	'99																
Total Plants/Acre (excluding Dead & Seedlings)																	
															'86	5398	Dec:
															'94	4300	
															'99	8260	